

# Work Order ID 53529

November 09, 2009 8:34:44 AM

Page 1

Item ID: D209-669-043  
Revision ID: B  
Item Name: Replacement Skidtube

Accept



Setup Start



Stop



Start Date: 11/9/2009 Start Qty: 1.00  
Required Date: 11/20/2009 Req'd Qty: 1.00



Cust Item ID:  
Customer:

Reference:

Approvals: Process Plan: mf Date: 09-11-09 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D2906	Rev B								

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D209-669 bluefile & type labels per PPP D205-669-043 Chg 002

N/A

110

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- Inspect mat'l D2500-1-190 for damage

2-Cut D2500-1-190 per Dwg D2906 if necessary Deburr ends

3-Acid etch and Alodine tube per QSI 005 4.1

1 M 9/11/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

9-11-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Drill pilot holes using drill jig DT8149, DT8711-2 &amp; DT8711-3 (Do not use cutting fluid)

M 9/11/9

2-Open holes to 0.500" as per Dwg D2906 without cutting fluid

3-Countersink holes as per Dwg D2906 without cutting fluid ← move to seq 150

11/09/11/11

4-Deburr and blow out all chips from inside of tube

5-Bond web in place per QSI 015. Allow 12 Hrs. cure time before cutting

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch  
A/R ☐ ☐ Sikaflex-291 ☐ M11239 ☐

Sikaflex expire date: 2010/02/30

Start Time: 4pm Date: 9-11-11

Fin Time: 8AM Date: 9-11-12

pick:

Qty	P/N	description	B/N
1	D2926-3	Web	B52524

B52524

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140  CNC Bend 1 CNC Delta 100 Bender	BENDING MACHINE - CROSSTUBES  Memo 1-Bend as per program COB43FWD & COBRAFT on CNC Bender and Folio FT 2-Cut tubes as per Dwg. D2906 & per template DT8185B & DT8185BC	0.00  0.00							
150  Skidtubes Skidtubes	Skidtubes  Memo 1-Cut tube as per dwg and ensure ends are perpendicular to ridge 2-Debur ends 3-Prepare tube for welding, remove alodine as required.	0.00  0.00							
160  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00  0.00							

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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170

0.00



Skidtubes

Large Fab

Memo

0.00

Skidtubes

1-Weld crossbolt spacers D2579 as per Dwg. D2906 and QSI 004.  
For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill  
A/R ☐ ☐ Aluminum Rod ml12507

2-Grind welds as per Dwg D2906 Grind flush ridge made from bending

3-Drill holes for wearplates using DT8217 Open holes to 19/64", adjust stopper  
not to hit web. Debur

4-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2906,  
Debur holes

5-Drill pilot holes for aft & fwd cap using DT8215 open holes to #6" Debur

6-Drill pilot holes for Tow ring using DT8091-3 , open to .640" and Debur

180



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

Memo

0.00

809/11/19

BE 09/11/13:  
DP 9-11-17

MB 09-11-18

Ⓢ

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo	0.00 0.00							
		=> 8/21/12				(42)	0		
200  HandFinish Hand Finishing	Pressure Wash per QSI005 4.3  Memo	0.00 0.00							
		=> 9/10/12				(X1)	0		
210  Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum 11/12/12 Memo START TIME: 8:00 AM OVEN TEMPERATURE: 320°F FINISH TIME: 8:30 AM	0.00 0.00							
		=> 9/11/12				(X1)	0		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

220

QC3- Inspect Part Finish

0.00

QC

Memo

0.00

Quality Control

BK 09-11-23 D.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	HandFinishing	0.00							
	HandFinish								
Hand Finishing	<p><b>Memo</b></p> <p>1-Install inserts &amp; wearplates as per Dwg. D2906. Use a drop of Sikaflex on insert holes before installing wearplates A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 11/12/391 Sikaflex expire date: 10/30</p> <p>2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2906</p> <p>3-Inspect for foreign object per QSI 024</p> <p>4-Install D2855 Fwd &amp; Aft Cap as per Dwg D2906 and seal Fwd &amp; Aft Cap with Sikaflex. Clean excess adhesive A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 11/12/391 Sikaflex expire date: 10/30</p> <p>5-Wing Walk as per Dwg D2906 and QSI 005 4.4 Batch: 1112673</p>	0.00							

PL 02-11-23.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Setup Start



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Start Date: 11/9/2009 Start Qty: 1.00  
Required Date: 11/20/2009 Req'd Qty: 1.00



Cust Item ID:  
Customer:

Reference:





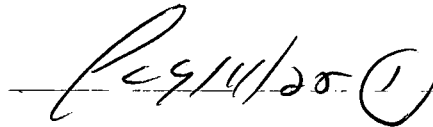

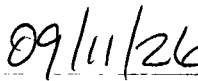
Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240  QC Quality Control	QC5- Inspect part completeness to step on W/O  Memo Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024	0.00 0.00							
250  Packaging Packaging Packaging	Packaging  Memo Identify and pack for shipping as per PPPD209-669-043 Location: _____ PPP Rev: <u>PPP 53529</u>	0.00 0.00							
260  QC Quality Control	QC21- Final Inspection - Work Order Release  Memo	0.00 0.00							

PC9/11/2009 (1)

09/11/26 (1)  
PL 09-11-25

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

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Page 1

Work Order ID: 53529

Parent Item: D209-669-043RevB

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2500-1-190RevU/R		Manufactured	No			110	Each	0.0000	1.0000			
Ext'n - 1' Beam Tube 4"												
D2926-3RevA		Manufactured	No			110	Each	1.0000	1.0000			
Web												

**B52524**

Warehouse  
Location  
Main Warehouse  
ST  
52066

D2579RevE



Crossbolt Spacer

Warehouse  
Location

Main Warehouse

LG

51525

Main Warehouse

ST

43988

46434

46956

47797

48272

51314

51315

Loc Qty

Loc Code

1

1

170

Each

615.0000

19.0000

**DP 9-11-11**

Loc Qty

Loc Code

493

493

122

4

4

2

9

2

71

30

**19 BE 9-11-13**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item Name: Replacement Skidtube



Start Date: 11/9/2009

Required Date: 11/20/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2855RevA 		Manufactured	No			230	Each	105.0000	2.0000			
Cap												
				<u>Warehouse</u>	<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>		
				Main Warehouse								
				FP6				105				
				50513				1				
				50770				4				
				51539 ✓				100				
AN3-5A 		Purchased	No			230	Each	2,221.000	4.0000			
Bolt												
				<u>Warehouse</u>	<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>		
				Main Warehouse								
				ST				2221				
				100188				188				
				105057 ✓				2033				

2 BL 09-11-23.

4. BL 09-11-23.

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Shop Packet Print

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Parent Item Name: Replacement Skidtube


Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN960JD10L  Washer		Purchased	No			230	Each	5,719.000	4.0000			

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	5719
101291	16
104885	153
105793	236
109632 ✓	410
110985	4904

H. BR 09-11-23.

ALS7-1032-130

Purchased

No

230 Each 1,880.000 44.0000



Insert

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST	1880
105855	16
108606	52
111529	1488
111779	313
112772	11

110511

H. BR 09-11-23.

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

November 09, 2009 8:34:44 AM

Page 4

Work Order ID: 53529

Parent Item: D209-669-043RevB

Parent Item Name: Replacement Skidtube



Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
AN3C4A 		Purchased	No			230	Each	944.0000	44.0000			
BOLT												

Warehouse Loc Qty Loc Code

Location

Main Warehouse

ST 113121

944

112314

13

112720

12

112724

3

112794

316

112829

500

112991

100

44 BR 09-11-23

AN960C10L

Purchased

No



washer

230

Each

3,906.000

44.0000



Warehouse

Loc Qty

Loc Code

Location

OFFSHORE

FG

100

103585

100

Main Warehouse

ST

3806

112116

628

112612 ✓

2178

112933

1000

44 BR 09-11-23

November 09, 2009 8:34:44 AM

Shop Packet Print

Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November 09, 2009 8:34:44 AM

Page 5

Work Order ID: 53529

Parent Item: D209-669-043RevB

Parent Item Name: Replacement Skidtube



Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D2594-3RevC 		Manufactured	No			230	Each	994.0000	14.0000			
O-Ring, 205 Skidtube												

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

27

51613

27

Main Warehouse

ST

967

52562 ✓

967

14 BR 09-11-03.

D2594-1RevC

Manufactured

No



Plug, 205 Skidtube

230

Each

585.0000

14.0000



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST

585

42221

16

42807

92

43884

3

46435

2

51527

9

51757 ✓

463

14. BR 09-11-03.

November 09, 2009 8:34:44 AM

Shop Packet Print

Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November 09, 2009 8:34:44 AM

Page 6

Work Order ID: 53529



Parent Item: D209-669-043RevB



Parent Item Name: Replacement Skidtube



Start Date: 11/9/2009

Required Date: 11/20/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-9RevD  Wearshoe		Manufactured	No			230	Each	31.0000	1.0000 			

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP19

29

51675

7

52593 ✓

22

Main Warehouse

ST

2

44659

1

45825

1

1 BR 02-11-23.

November 09, 2009 8:34:44 AM

Shop Packet Print

Page 6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November 09, 2009 8:34:44 AM

Work Order ID: 53529



Parent Item: D209-669-043RevB



Parent Item Name: Replacement Skidtube



Start Date: 11/9/2009

Required Date: 11/20/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-11RevD 		Manufactured	No			230	Each	43.0000	1.0000			
Wearshoe												

## Warehouse

## Loc Qty

## Loc Code

### Location

Main Warehouse

FP

10

51905

10

Main Warehouse

FP19

31

51594

8

52125

23

Main Warehouse

ST

2

45823

1

50112

1

1 BR 09-11-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

November 09, 2009 8:34:44 AM

Work Order ID: 53529

Parent Item: D209-669-043RevB

Parent Item Name: Replacement Skidtube



Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3564-5RevD  Wearshoe		Manufactured	No			230	Each	34.0000	1.0000 			

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
OFFSHORE		
FG	2	
34806	2	
Main Warehouse		
FP19	16	
51655	8	
51925 ✓	8	
Main Warehouse		
ST	16	
45824	1	
47433	1	
52595	14	

*BR 09-11-09*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 9

November 09, 2009 8:34:44 AM

Work Order ID: 53529

Parent Item: D209-669-043RevB

Parent Item Name: Replacement Skidtube

Comments:

Start Date: 11/9/2009

Required Date: 11/20/2009

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3566-1RevC		Manufactured	No			230	Each	20.0000	2.0000			



Gasket



Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

15

52512

15

Main Warehouse

ST

5

46349

1

51218

1

51259

3

53455

2 BR 09-11-23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

November 09, 2009 8:34:44 AM

Work Order ID: 53529



Parent Item: D209-669-043RevB



Parent Item Name: Replacement Skidtube

Start Date: 11/9/2009

Required Date: 11/20/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3566-5RevC		Manufactured	No			230	Each	34.0000	1.0000			
Gasket												

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

FP

10

51929

10

Main Warehouse

FP19

20

52909 ✓

20

Main Warehouse

ST

4

36113

1

46186

1

47318

1

51260

1

1. BL 09-11-23.

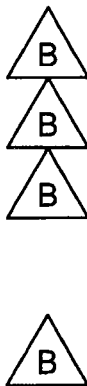
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



QTY -041	QTY -043	Part Number	Description
X		D2906-041	SKIDTUBE ASSEMBLY
	X	D2906-043	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
22	19	D2579	CROSS BOLT SPACER
12	14	D2594-1	PLUG
12	14	D2594-3	O-RING
2	2	D2855	AFT CAP
1		D2926-1	WEB
	1	D2926-3	WEB
1	1	D3564-9	WEARSHOE (REPLACES D2577-1)
1	1	D3564-11	WEARSHOE (REPLACES D2577-3)
1	1	D3564-5	WEARSHOE (REPLACES D2577-5)
1		D3564-15	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1		D3566-15	GASKET
50	44	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or ALS4-1032-130	INSERT
50	44	AN3C4A	BOLT
4	4	AN3-5A	BOLT
50	44	AN960C10L	WASHER
4	4	AN960JD10L	WASHER

**GENERAL NOTES:**

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 2) LENGTH OF D2500-1 EXTRUSION BEFORE BENDING = 190 INCHES.
- 3) INSERT D2926-1/-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 6) USE DART DRILL TEMPLATE DT2906-041T1 (D2906-041) OR DT2906-043T1 (D2906-043) TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION C-C AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/291.
- 7) WELDING TO BE DONE PER DART QSI 004.
- 8) FINISH:  
ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2926-1/-3 WEB. POWDER COAT ASSEMBLY WHITE (REF 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4
- 9) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (12 PLACES).
- 10) ALL DIMENSIONS ARE IN INCHES.

**RELEASED**

07.09.04

#53529

B	UPDATE DRAWING FORMAT; RE-ORGANIZE; ADD STAINLESS STEEL WEARPLATES AND GASKETS CHANGE WEARPLATE HARDWARE TO SS; PG 1: ADD NOTE 10; PG 2 C7: REMOVE AFT Ø0.640 HOLE FROM -041; PG 3 C3: CORRECTED -043 CAP P/N; PG 3 D7: 38 PLACES WAS 44 PLACES;	CB	07.08.21
A	NEW ISSUE	CP	04.06.22
REV.	DESCRIPTION	BY	DATE
DESIGN	9P	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	CB		
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	21	D2906	SHEET 1 OF 3
APPROVED	10	TITLE	SCALE
DE APPR.	11	AH-1 (209) SKIDTUBE ASSEMBLY	NTS
DATE	07.08.21	COPYRIGHT © 2004 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

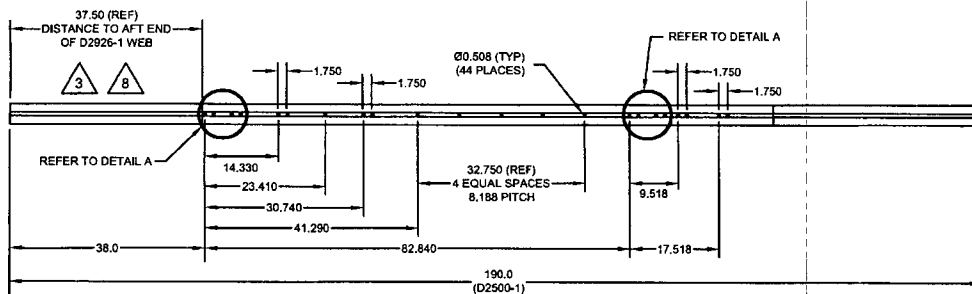
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

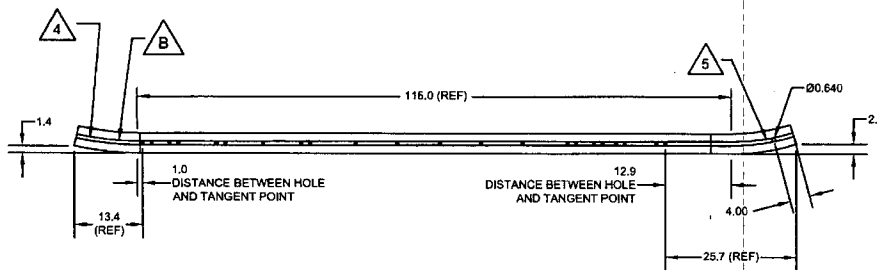
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

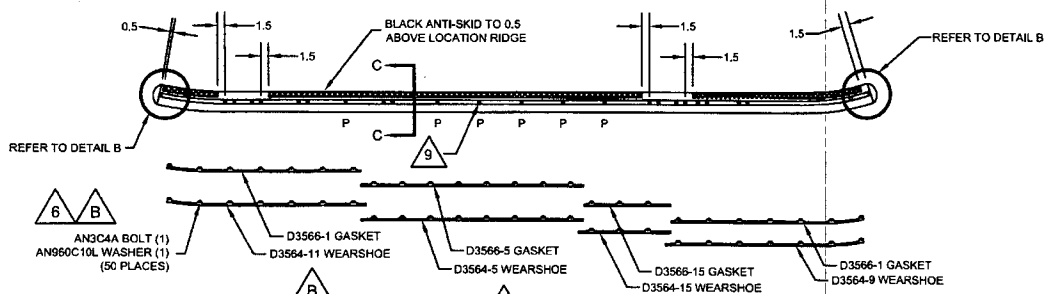




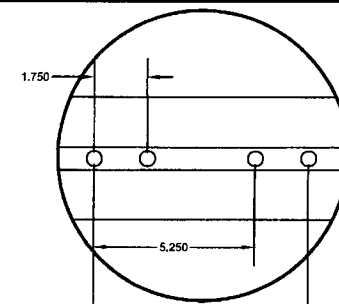
**D2906-1 DRILLING DETAIL**



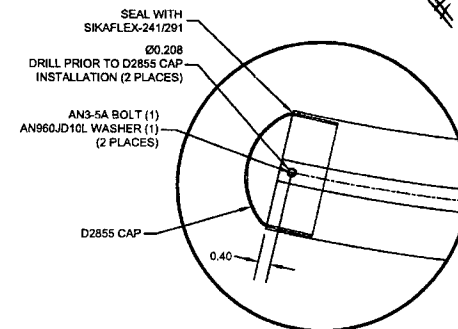
**D2906-041 BENDING AND CUTTING DETAIL**



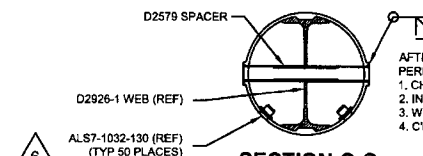
**D2906-041 ASSEMBLY DETAIL**



**DETAIL A  
SCALE 1:4**



**DETAIL B  
SCALE 1:4**



**SECTION C-C  
SCALE 1:4**

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2579 SPACER (22 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DESIGN	9P	<b>DART AEROSPACE LTD</b>	
DRAWN	CB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	PH	D2906	SHEET 2 OF 3
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	AH-1 (209) SKIDTUBE ASSEMBLY	1:24
DATE	07.08.21	COPYRIGHT © 2004 BY DART AEROSPACE LTD	
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**RELEASED**  
07.09.04

#53529

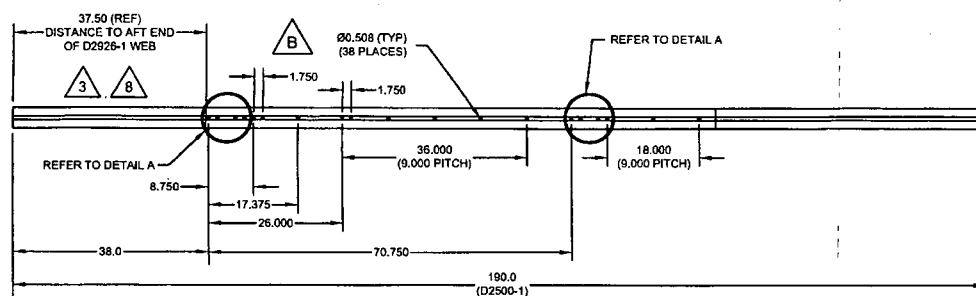
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

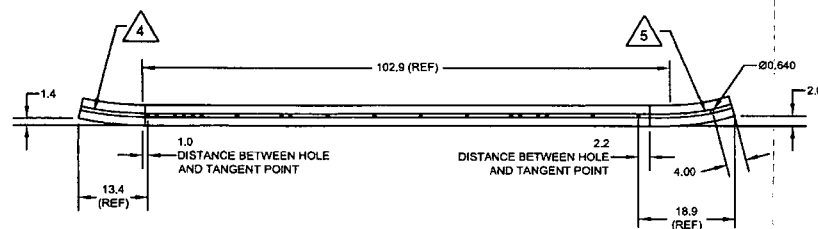
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

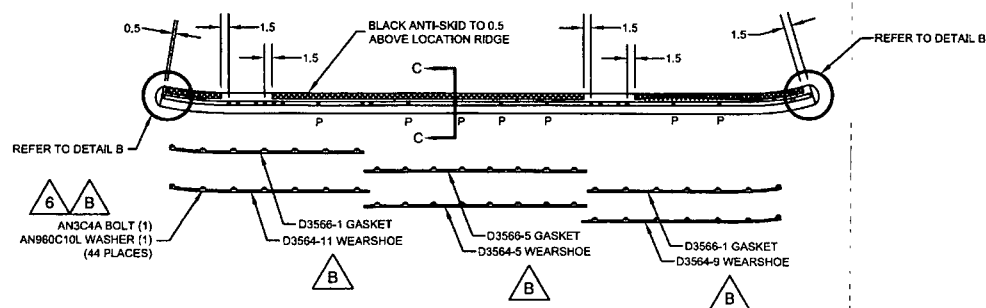
**NOTE:** Date & initial all entries



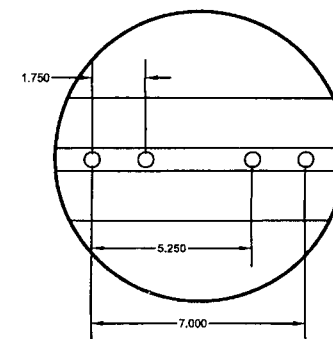
**D2906-3 DRILLING DETAIL**



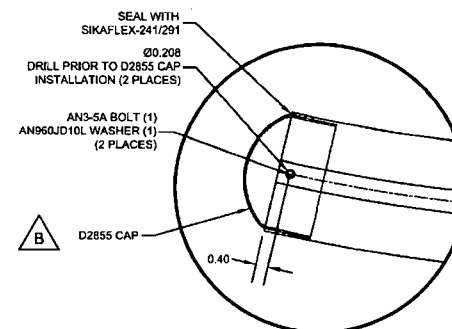
**D2906-043 BENDING AND CUTTING DETAIL**



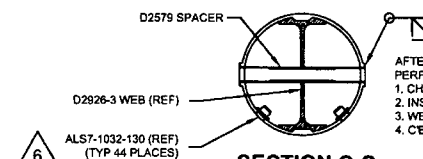
**D2906-043 ASSEMBLY DETAIL**



**DETAIL A  
SCALE 1:4**



**DETAIL B  
SCALE 1:4**



**SECTION C-C  
SCALE 1:4**

AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:  
1. CHAMFER HOLE 0.050 X 45°  
2. INSERT D2578 SPACER (22 PLACES)  
3. WELD INTO PLACE AND GRIND FLUSH  
4. C-BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

**RELEASED**

07.09.04

DESIGN	99	<b>DART AEROSPACE LTD</b>	
DRAWN	C.B.	HAWKESBURY, ONTARIO, CANADA	
CHECKED	PH	DRAWING NO.	REV. B
MFG. APPR.	PH	D2906	SHEET 3 OF 3
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	AH-1 (209) SKIDTUBE ASSEMBLY	1:24
DATE	07.08.21	COPYRIGHT © 2004 BY DART AEROSPACE LTD	
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

NO. 215

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: 53175  
Part number: D205-634.041  
Description: 205 skid tube  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminium  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier [Signature] Date of Test Coupon 09.11.02

Welder [Signature] Date of Test Coupon 09.11.02

The above named individual is qualified in accordance with AWS D17.1.2001 to weld